Remarks

A.   Claims in the Case

Claims 1-4, 6, 9-17, 19, 22-30, 32, 35-39, and 41-43 are pending.   Claims 1, 14-17, 19, and 22-27 have been amended.

B.   Claim Objections

The Examiner objected to claim 1 for being in "improper method claim format".   The Examiner apparently takes the position every feature of the claim must begin with a verb ending in "ing".   Applicant respectfully disagrees with the Examiner's position. Nevertheless, Applicant has amended claim 1 for clarification.

C.   The Claims Are Not Obvious Over The Cited Art Under 35 U.S.C. § 103(a)

Claims 1-3, 14-17, and 27-30 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,940,809 to Musmanno et al. (hereinafter "Musmanno") in view of U.S. Patent No. 5,430,644 to Deaton et al. (hereinafter "Deaton") and further in view of U.S. Patent No. 6,970,844 to Bierenhaum.   Applicant respectfully disagrees with the rejections.

To reject a claim as obvious, the Examiner has the burden of establishing a *prima facie* case of obviousness. *In re Warner et al.,* 379 F.2d 1011, 154 USPQ 173, 177-178 (CCPA 1967). To establish a *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka,* 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974), MPEP § 2143.03.

Amended claim 1 includes, but is not limited to, the features of:

> creating a plurality of smart triggers, each of the smart triggers comprising:
>> a task identifier that identifies one of the FSO related processing tasks;
> and
>> at least one data set identifier selected from the list of data set identifiers associated with the FSO related processing task identified by the task identifier;

scheduling a date for processing each of the smart triggers;

configuring a smart trigger table having the plurality of the created smart triggers, the smart trigger table comprising, for each of the created smart triggers:
the task identifier associated with the smart trigger;
the at least one data identifier associated with the smart trigger; and
the scheduled date for processing the smart trigger;

The Office Action appears to rely on Musmanno with respect to the feature of configuring a smart trigger table having a plurality of smart triggers. Applicant respectfully disagrees that Musmanno, either alone or in combination with any of the other cited references, appears to teach or suggest at least this feature.

Applicant's claims are directed to preparing and using a smart trigger table to efficiently process processing tasks with a Financial Service Organization ("FSO") computer system. As noted in Applicant's background section, processing of recurring tasks by a FSO computer system may be very inefficient. For example, Applicant's specification states:

In prior art and in one embodiment, the processing of data sets or master files was periodic and 'account centric'. Application programs in the FSO computer system had to be scheduled to read and evaluate sequentially every record in the data set to determine if one or more processing tasks were to be executed for the record. For example, a data set may contain a list of all account numbers for an FSO. Processing of an account at a pre-determined period, may comprise evaluating conditions to execute for each account number a list of one or more functions or processing tasks. Preferred embodiments of the processing tasks performed on an account number may require the FSO to raise credit limit, change expiration date, send card data for embossing, and others. For example, the FSO may need to extend the expiration date on a group of credit card accounts, which have a current expiration date of 12/99. The application program would sequentially access every record in an account master file and determine which one of the one or more functions or processing tasks is needed to be performed. Each record lacks information that identifies the particular processing task to be performed. This requires that each of the one or more functions or processing tasks must be queried to determine if it is applicable. If master file record matches the specified criteria of having an expiration date of 12/99, then it would execute the processing task that is subsequently found to be applicable i.e. extend the date of expiration of the credit card. If the evaluation criteria did not match then it would go to the next record in the FSO account master file. Assuming a master file has millions of records, and each record may have one or more processing tasks associated with it, the process of sequentially accessing every record to

determine applicability of a processing task to a specific record is very inefficient
and time consuming. The method also utilizes extensive FSO computer resources
to process FSO data sets.

To overcome the drawbacks of prior art systems, Applicant has devised a method of using "smart triggers" to more efficiently process transactions. Smart triggers allow the selective identification and execution of only those processing tasks for an FSO data set which have been identified to need further processing. The Smart Trigger method and system to process FSO data sets, improves on the trigger and stored procedure methods by removing their drawbacks and uses periodic and event based techniques. The improved method and system is thus more 'function centric' and not 'account centric'.

A FSO computer system includes one or more data set records. The data set records include information related to FSO accounts, among other data. A set of data set identifiers are provided which point to the physical location of the data set records. From the set of data set identifiers, a list of data set identifiers related to each of the processing tasks associated with the FSO computer system is prepared. One or more smart triggers are used to control execution of processing tasks. Each smart trigger includes at least three elements: "a task identifier", "at least one data set identifier", and "a schedule date." The "task identifier" identifies one of the FSO processing tasks. A "data set identifier" identifies the physical location of one or more data set records. The data set identifier(s) associated with the smart trigger are selected from the list of data set identifiers previously associated with the processing task corresponding to the task identified by the task identifier. The schedule date is the date that the task associated with the smart trigger is processed.

Applicant submits that neither Musmanno, nor any of the other cited references, appears to teach or suggest a table of smart triggers. Specifically, Musmanno appears to teach that "once converted" a standard transaction includes certain identification information, but does not appear to teach or suggest that a "schedule date" is associated with the transaction. Musmannao states:

> Once converted by the formatter module, a standard transaction consists of three
> main sections: a control section, a common section and an application specific

16

section. The control section is used to identify the standard transaction. The fields in this section are Format, Type, Action and Sequence Number. These fields are used to organize transactions into logical groupings. The Sequence Number field is used when transactions with similar Format, Type and Action values are on a sequential file in order to uniquely identify them. These fields, when combined with a Business Function, are used by the system to determine a path to process the transactions.

The common section contains data such as the UID, external number and type used to obtain the FI and/or debit card number. These fields do not vary and are common to every standard transaction, although the values will differ. The application specific section contains the actual business data for which the transaction is intended. For example, this data might include the amount of a debit card purchase in a transaction.
(Col. 5, line 56 – Col. 6, line 9)

Musmanno appears to teach that a standard formatted transaction can be created from incoming transactions, and such transactions include information such as the transaction type and a UID. Musmanno does not appear to teach a schedule date that is associated with the standard transaction. Applicant submits that Musmanno's "standard transaction" cannot be properly equated with Applicant's smart trigger.

Musmanno teaches that each standard transaction may include a UID or an external number that may be used to identify an account number associated with a requested transaction. For example, Musmanno states:

All transactions coming from external sources will carry the external system's account number. This external account number must be cross referenced to a customer's UID before the transaction can be processed. Likewise, any standard transaction will carry the Customer's UID. This number must be cross-referenced to an external account number before the transaction is converted and sent to an external system.
(Col. 6, lines 17-24)

Musmanno appears to rely on a UID to access data used to process transactions. In order to determine the account information associated with a UID, or correlate the UID associated with a specific account, a reference table is used. This reference table appears to be separate from the standard transaction. For example, Musmanno states:

The Central Reference table (404) is the cross referencing table. It contains one row per UID and External Number and External Number type (debit card type, FI, Check, etc). There can be several external numbers assigned to the same customer; therefore, there may be several rows in the table for a single UID. The table also contains the status of the external number, and effective, assignment and end dates, among other fields. The Central Reference History table (406) will contain all the before images of rows changed or deleted on the Central Reference Table (404).

(Musmanno, Col. 6, lines 42-51)

Applicant submits that the "Central Reference Table" is merely a "look-up" table for associating a UID with information related to a specific account. The information related to the specific account includes information related to the effective date of an account and the end date of the account. Neither of these dates, however, appears to be related to a scheduled date. Applicant submits that Musmanno does not appear to teach or suggest a smart trigger that includes "a task identifier", "at least one data set identifier", and "a schedule date." Applicant further submits that Musmanno does not appear to teach or suggest a smart trigger table. That is, even if the "standard transaction" of Musmanno is equated with Applicant's "smart triggers," for argument sake only, Musmanno does not appear to teach or suggest forming a table that includes "standard transactions." Thus Musmanno alone, or in combination with the other cited references, does not appear to teach or suggest Applicant's smart triggers or Applicant's smart trigger table.

Amended claim 1 further describes:

wherein executing each of at least two the FSO related processing tasks comprises executing the FSO related processing task on FSO related data set records that correspond to the at least one data set identifier from the list of associated data set identifiers for the FSO related processing task, but not executing the FSO related processing task on FSO related data set records that do not correspond to the data set identifiers from the list of associated data set identifiers for the FSO related processing task

The Examiner does not appear to cite any art relative to the above-quoted feature. Applicant respectfully submits that the cited art does not appear to teach or suggest at least this feature of claim 1, in combination with the other features of the claim.

Claim 1 further describes:

>sequentially reading at least two of the smart triggers from the first memory; and, for each of the smart triggers read from the first memory:
>>comparing the scheduled date for processing the smart trigger to the current date; and
>>executing the FSO related processing task associated with the smart trigger to process the data contained in the data set records associated with one or more of the data set identifiers associated with the smart trigger in response to reading the smart trigger from the first memory if the scheduled date of the smart trigger is equal to or before the current date, but not executing the FSO related processing task in response to reading the smart trigger from the first memory if the scheduled date of the smart trigger is after the current date,

The Examiner states:

>Musmanno failed to teach, storing the smart trigger table in a first memory of the computer system; sequentially reading at least two of the smart triggers from the first memory and for each of the smart triggers read from the first memory. Deaton teaches storing the smart trigger table in a first memory of the computer system; sequentially reading at least two of the smart triggers from the first memory (col. 11, line 39-col. 12, line 53); and for each of the smart triggers read from the first memory (col. 13, lines 5-29).

Applicant notes that, as recited in claim 1, the phrase "for each of the smart triggers read from the first memory:" (which ends with a colon) applies to the features that follow of "comparing the scheduled date for processing the smart trigger to the current date", and "executing the FSO related processing task associated with the smart trigger....". The Examiner appears to sever the introductory phrase "for each of the smart triggers read from the first memory:" from its context within claim 1 and its relationship with the "comparing..." and "executing..." features that follow the phrase. In any case, Deaton does not appear to teach or suggest sequentially reading smart triggers from a memory. The cited portion of Deaton discloses an automatic check reader operable to read MICR characters imprinted on checks which are passed through the check reader (see, e.g., Deaton, column 11, lines 39-43). The check reader can detect the location of the customer account number on the check and omit all other portions of the MICR code "except for the account number and perhaps the transit number." (Deaton, column 12, lines 21-25).

For at least the above reasons, Applicant respectfully submits that claim 1 and the claims dependent thereon are allowable over the cited art. Applicant respectfully requests removal of the rejections under 35 U.S.C. § 103(a) of these claims.

Amended claim 14 describes a combination of features including:

creating a plurality of smart triggers, each of the smart triggers comprising:
a task identifier that identifies one of the FSO related processing tasks; and
at least one data set identifier selected from the list of data set identifiers associated with the FSO related processing task identified by the task identifier;

scheduling a date for processing each of the smart triggers;

configuring a smart trigger table having the plurality of the created smart triggers, the smart trigger table comprising, for each of the created smart triggers:
the task identifier associated with the smart trigger;
the at least one data identifier associated with the smart trigger; and
the scheduled date for processing the smart trigger;

storing the configured smart trigger table in a first memory of the computer system;

sequentially reading at least two of the smart triggers from the first memory; and

executing the FSO related processing task associated with the smart trigger to process the data contained in the data set records associated with one or more of the data set identifiers associated with the smart trigger in response to reading the smart trigger from the first memory if the scheduled date of the smart trigger is equal to or before the current date, but not executing the FSO related processing task in response to reading the smart trigger from the first memory if the scheduled date of the smart trigger is after the current date,
wherein executing each of at least two of the executed FSO related processing tasks comprises:
using the task identifier associated with the smart trigger to identify the FSO related processing task to be executed in response to reading the smart trigger; and
using the at least one data identifier associated with the smart trigger to identify FSO related data set records to be processed in response to reading the smart trigger;

20

wherein executing each of at least two of the FSO related processing tasks comprises executing the FSO related processing task on FSO related data set records that correspond to the at least one data set identifier from the list of associated data set identifiers for the FSO related processing task, but not executing the FSO related processing task on FSO related data set records that do not correspond to the data set identifiers from the list of associated data set identifiers for the FSO related processing task

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For at least the reasons discussed in reference to claim 1, Applicant submits that the combination of the cited art does not appear to teach or suggest all of the features of Applicant's claim 14 and the claims dependent thereon.

Amended claim 27 describes a combination of features including:

creating a plurality of smart triggers, each of the smart triggers comprising:
a task identifier that identifies one of the FSO related processing tasks; and
at least one data set identifier selected from the list of data set identifiers associated with the FSO related processing task identified by the task identifier;

scheduling a date for processing each of the smart triggers;

configuring a smart trigger table having the plurality of the created smart triggers, the smart trigger table comprising, for each of the created smart triggers:
the task identifier associated with the smart trigger;
the at least one data identifier associated with the smart trigger; and
the scheduled date for processing the smart trigger;

storing the configured smart trigger table in a first memory of the computer system;

sequentially reading at least two of the smart triggers from the first memory; and

executing the FSO related processing task associated with the smart trigger to process the data contained in the data set records associated with one or more of the data set identifiers associated with the smart trigger in response to reading the smart trigger from the first memory if the scheduled date of the smart trigger is equal to or before the current date, but not executing the FSO related processing task in response to reading the smart trigger from the first memory if the scheduled date of the smart trigger is after the current date,

wherein executing each of at least two of the executed FSO related processing tasks comprises:

using the task identifier associated with the smart trigger to identify the FSO related processing task to be executed in response to reading the smart trigger; and

using the at least one data identifier associated with the smart trigger to identify FSO related data set records to be processed in response to reading the smart trigger;

wherein executing each of at least two of the FSO related processing tasks comprises executing the FSO related processing task on FSO related data set records that correspond to the at least one data set identifier from the list of associated data set identifiers for the FSO related processing task, but not executing the FSO related processing task on FSO related data set records that do not correspond to the data set identifiers from the list of associated data set identifiers for the FSO related processing task.

For at least the reasons discussed in reference to claim 1, Applicant submits that the combination of the cited art does not appear to teach or suggest all of the features of Applicant's claim 27 and the claims dependent thereon.

Applicant submits that many of claims dependent on claims 1, 14, and 27 are separately patentable. For example, claim 41 describes a combination of features including:

wherein the smart trigger table comprises a list of pointers to an account data set, wherein the smart trigger table includes:
an activity number associated with each of the pointers, wherein the activity numbers identify further processing of the account data set; and
activity data associated with each of the activities numbers, wherein the activity data is processed on a user specified scheduled date

The cited art does not appear to teach or suggest at least this feature of claim 41, in combination with the other features of the claim.

The Office Action relies on Musmanno for the above-quoted features of claim 41. Musmanno teaches a cross-referencing table having "one row per UID and external number and external Number type (debit card type, FI, Check, etc.)" (Musmanno, col. 6, lines 43-45). The UID concept assigns a distinct number to each financial institution. (Musmanno, col. 6, lines 12-
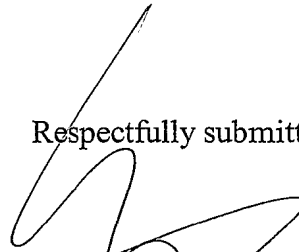
13). Musmanno does not appear to teach or suggest a smart trigger table having a list of pointers to an account data set, the table including an activity number being associated with each pointer and identifying further processing of the account data set; activity data associated with each of the activities numbers, wherein the activity data is processed on a user specified schedule date.

D.   Additional Comments

Applicant respectfully submits that all claims are in condition for allowance. Favorable reconsideration is respectfully requested.

If any extension of time is required, Applicant hereby requests the appropriate extension of time. If any fees are required, please appropriately charge those fees to Meyertons, Hood, Kivlin, Kowert & Goetzel, P.C. Deposit Account Number 50-1505/5053-31001/EBM.

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